LA-CO Markal

# SAFETY DATA SHEET

## Section 1: Product and Company Identification

**Product Name:** Regular Soldering Flux Paste

**Product Use:** Soldering flux for copper, brass, galvanized iron, lead, zinc, tin, silver, nickel, mild steel, terne plate and malleable iron.

**Manufacturer:** LA-CO Industries, Inc.
1201 Pratt Boulevard
Elk Grove Village, IL.
60007-5746

**Phone Number:** (847) 956-7600
Fax: (847) 956-9885

**24-hour Emergency:** **CHEMTREC: (800) 424-9300**

## Section 2: Hazards Identification

| Protective Clothing | NFPA Rating (USA) | EU Classification | WHMIS (Canada) | Transportation |
|---|---|---|---|---|
|  |  | **Not classified as dangerous** |  **Not controlled** | **Not Regulated** |

**Emergency Overview:** Exposure to hazardous substances is not expected when handling this product for its intended use.
**Appearance, Color and Odor:** White paste; faint odor.

USA: This material is not considered hazardous by the OSHA hazard Communication Standard (29 CFR 1910.1200).

Canada: This is not a controlled product under WHMIS.

European Union (EU): This product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

**Potential Health Effects** **ACUTE (short term): see Section 8 for exposure controls**

**Relevant Route(s) of Exposure:** Skin contact, Inhalation.

**Inhalation:** Inhalation of vapors is not expected with normal use. Over exposure to high vapor concentrations may cause nasal and respiratory irritation, sore throat, coughing and difficulty breathing. High concentrations may also cause dizziness, headache, nausea, vomiting or in extreme cases, unconsciousness or asphyxiation.

**Ingestion:** Not an expected route of occupational exposure. Low oral toxicity. Swallowing large quantities may cause abdominal and chest pain, nausea, vomiting, diarrhea or dizziness. Aspiration into the lungs may occur during swallowing or from vomiting, resulting in lung injury.

**Skin:** This product has been tested and found to be non-irritating to skin.

**Eye:** This product has been tested and found to be non-irritating to eyes. Solids may cause temporary irritation as a foreign object in the eye.

**CHRONIC (long term): see Section 11 for additional toxicological data**

Chronic effects are not expected with normal use. Prolonged or repeated over exposure to high vapor concentrations may cause damage to the respiratory tract or lungs.

**Medical Conditions Aggravated by Exposure:** Not available

**Interactions With Other Chemicals:** Not available

**Potential Environmental Effects:** Not available

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## Section 3: Composition / Information on Ingredients

**Hazardous Ingredients:**

| Chemical Name | CAS No. | Wt.% | EINECS / ELINCS | Symbol | Risk Phrases |
|---|---|---|---|---|---|
| Ammonium Chloride | 12125-02-9 | 7 – 13 | 235-186-4 | Xn, Xi | R22, R36 |
| 2-hydroxyethylammonium chloride | 2002-24-6 | 7 - 10 | 217-900-6 | Not classified | Not classified |
| Stearic Acid | 57-11-4 | 1 – 5 | 200-313-4 | None | None |

**Note**: See Section 16 for the full text of the R-phrases above.

## Section 4: First Aid Measures

**Inhalation:** If symptoms are experienced remove source of contamination or move victim to fresh air and obtain medical advice.

**Eye Contact:** If material becomes lodged in the eye, do not allow victim to rub eye(s). Let the eye(s) water naturally for a few minutes. Have victim look right and left, and then up and down. If particle/dust does not dislodge, flush with lukewarm, gently flowing water for 5 minutes or until particle/dust is removed, while holding the eyelid(s) open. If irritation persists, obtain medical attention. DO NOT attempt to manually remove anything stuck to eye(s).

**Skin Contact:** Quickly and gently, blot or brush away excess paste. Wash gently and thoroughly with lukewarm, gently flowing water and non-abrasive soap for 5 minutes. If irritation develops, obtain medical advice.

**Ingestion:** If swallowed in large amounts or if irritation or discomfort occurs, obtain medical advice immediately.

## Section 5: Fire Fighting Measures

**Flammable Properties:** Product will burn if involved in a fire but does not ignite readily.

**Suitable extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or an appropriate foam. Use water spray to cool fire-exposed containers.

**Unsuitable extinguishing Media:** Not applicable

**Explosion Data:**

**Sensitivity to Mechanical Impact:** Not applicable

**Sensitivity to Static Discharge:** Not applicable

**Specific Hazards arising from the Chemical:** During a fire, products of combustion may include Carbon dioxide, carbon monoxide, ammonia, hydrogen chloride, smoke and irritating and toxic fumes may be formed.

**Protective Equipment and precautions for firefighters:** Self-contained breathing apparatus and protective clothing should be worn. Remove all unprotected personnel.

**NFPA**

**Health:** 0
**Flammability:** 0
**Instability:** 0

## Section 6: Accidental Release Measures

**Personal Precautions:** Wear protective gloves. Spilled product may pose a slipping hazard.

**Environmental Precautions:** Prevent the product from entering sewers or waterways.

**Methods for Containment:** Stop the spill if it is safe to do so. Contain spilled flux with earth, sand, or absorbent material which does not react with spilled material.

**Methods for Clean-up:** Scrape or scoop up the spilled product and collect for re-use or proper disposal. Dispose of any contaminated, unusable product as described in Section 13 of this SDS.

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## Section 7: Handling and Storage

**Handling:** Avoid contact with eyes and skin; do not breathe fumes. Do not ingest. Keep out of reach of children. Use this material with adequate ventilation. Keep container closed when not in use. Wash thoroughly with detergent and water after handling, before eating, drinking, smoking or using the toilet.

**Storage:** Store in a cool, dry area, away from incompatible materials (see Section 10).

## Section 8: Exposure Controls/Personal Protection

**Exposure Guidelines**

| Ingredient | ACGIH TLV (8-hr. TWA) | U.S. OSHA PEL (8-hr. TWA) | Ontario (Canada) TWAEV | UK OEL (8-hr. TWA) |
|---|---|---|---|---|
| Ammonium Chloride | 10 mg/m$^3$ (fume); 20 mg/m$^3$ STEL | 10 mg/m$^3$ (fume); 20 mg/m$^3$ STEL | 10 mg/m$^3$; 20 mg/m$^3$ STEV | 10 mg/m$^3$ (fume); 20 mg/m$^3$ STEL |
| Stearic Acid | Not established | Not established | Not established | Not established |

STEV = Short Term Exposure Value
STEL = Short Term Exposure Limit

**Exposure Controls**

**Engineering Controls:** Provide adequate ventilation/local exhaust to keep vapor concentrations below the exposure limits listed above.

**Personal Protection:** Workers must comply with the Personal Protective Equipment requirements of the workplace in which this product is handled.
For welding operations, refer to the appropriate occupational safety standard. For operations requiring specific protection for mechanical hazards and heat protection refer to the appropriate occupational safety standard.

**Eye/Face Protection:** Wear eye/face protection (e.g. goggles/face shield) appropriate for the workplace where this material is handled and the conditions of use.

**Skin Protection:** Wear appropriate protective gloves and clean, body-covering clothing, when workplace conditions warrant their use.

**Respiratory Protection:** Not required for normal use.
If ventilation and other engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protective equipment (RPE). Where occupational exposure limits are exceeded, workers must wear an approved respirator. In workplaces where respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection. Consult with respirator manufacturer to determine respirator selection, use and limitations.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements, European Standard EN529 or Canadian Standards Association (CSA) Standard Z94.4-2002 must be followed whenever workplace conditions warrant a respirator's use.

**General Hygiene Measures:** Do not ingest. Avoid contact with skin and eyes. Keep out of reach of children. Wash hands after handling.

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## Section 9: Physical and Chemical Properties

| | | | |
|---|---|---|---|
| **Physical State:** | Paste | **Vapor Pressure (mm Hg @ 25°C):** | Not available |
| **Appearance:** | White | **Vapor Density (Air = 1):** | Not available |
| **pH:** | 6.5 – 7 | **Solubility in Water:** | Water soluble<br>Fat insoluble |
| **Relative Density (water = 1):** | 1.1 | **Water / Oil distribution coefficient:** | Not available |
| **Boiling Point:** | Not available | **Odor Type:** | Low odor |
| **Freezing Point:** | Not available | **Odor Threshold:** | Not available |
| **Viscosity:** | Not available | **Evaporation Rate (n-Butyl Acetate = 1):** | Not available |
| **Oxidizing Properties:** | Not available | **Auto Ignition Temperature (°C):** | Not available |
| **Flash Point and Method:** | >204°C (400°F) TOC | **Flammability Limits (%):** | Not available |

## Section 10: Stability and Reactivity

**Chemical Stability:** Stable at normal room temperature.

**Conditions to Avoid:** Not available

**Incompatible Materials:** Incompatible with strong oxidizing agents, strong acids, bases, amines, carbonates, aldehydes, acid chlorides and anhydrides, aluminum, cellulose nitrate, cyanides, sulfides, and potassium chlorate.

**Hazardous Decomposition Products:** Not available

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

## Section 11: Toxicological Information

**Acute Toxicity Data for the mixture:** Regular Soldering Flux Paste: $LD_{50}$ Oral: > 5 gm/kg (rat)
(Tested by Rosner-Hixson Laboratories; August 30, 1962)

**Chronic Toxicity Data**

**Carcinogenicity:** Normal use of this product will not result in exposure to any component that is considered a human carcinogen by IARC (International Agency for Research on Cancer); ACGIH (American Conference of Governmental Industrial Hygienists, OSHA or NTP (National Toxicology Program).

**Irritation:** The product is essentially non-irritating to the eyes and skin. Application of the product to areas of intact and abraded rabbit skin produced no signs of skin irritation (Rosner-Hixson Laboratories; Aug 30, 1962).

**Corrosivity:** Not applicable

**Sensitization:** Not applicable

**Neurological Effects:** Not available

**Genetic Effects:** Not available

**Reproductive Effects:** Not available

**Developmental Effects:** Not available

**Target Organ Effects:** Not available

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## Section 12: Ecological Information

| | |
|---|---|
| **Ecotoxicity:** | Not available |
| **Persistence/Degradability:** | Not available |
| **Bioaccumulation/Accumulation:** | Product is not readily biodegradeable. |
| **Mobility:** | Not available |

## Section 13: Disposal Considerations

| | |
|---|---|
| **Waste Disposal Method:** | Do NOT discard into any sewers, on the ground or into any body of water. Store material for disposal as indicated in Section 7 Handling and Storage.<br>The conditions of use, storage and disposal of this product are beyond our control and may be beyond our knowledge. For this and other reasons, the supplier does not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product. |
| **USA:** | Dispose of in accordance with local, state and federal laws and regulations. |
| **Canada:** | Dispose of in accordance with local, provincial and federal laws and regulations. |
| **EU:** | Waste must be disposed of in accordance with relevant EU Directives and national, regional and local environmental control regulations. |

## Section 14: Transport Information:

| | |
|---|---|
| **U.S. Hazardous Materials Regulation (DOT 49CFR):** | Not regulated |
| **Canadian Transportation of Dangerous Goods (TDG):** | Not regulated |
| **ADR/RID:** | Not regulated |
| **IMDG:** | Not regulated |
| **Marine Pollutants:** | Not applicable |
| **ICAO/IATA:** | Not regulated |

## Section 15: Regulatory Information

**USA**

**TSCA Status:** All ingredients in the product are listed on the TSCA inventory.

**SARA Title III**

| | |
|---|---|
| Sec. 302/304: | None |
| Sec: 311/312: | Not applicable |
| Sec. 313: | Not applicable |
| CERCLA RQ: | Not applicable |

**California Prop 65:** This product is not known to contain chemicals known to the State of California to cause cancer or reproductive harm.

**State Right-to-Know Lists :** Ammonium chloride can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

**Canada**

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*.

**WHMIS Classification:** Not controlled

**DSL:** All component substances are listed on Canada's Domestic Substances List (DSL).

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## Section 15: Regulatory Information, continued

**EU Classification for the Substance/Preparation**

**Symbol:** This product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

**Safety Phrases:** S1/2: Keep locked up and out of the reach of children.

## Section 16: Other Information

**Full Text of R-phrases appearing in Section 3:** R22: Harmful if swallowed
R36: Irritating to eyes

**Preparation Information:**

**Revision Date:** **Reviewed August 13, 2014**

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